

Opener Question

Example 1: Solve using elimination.

i) $4x + 3y = 24$
 $3y - x - 8 = 0$
 $-x + 3y = 8$
 $4x + 3y = 24$
 $-x + 3y = 8$
 $5x = 16$
 $x = \frac{16}{5}$

ii) $3x + 4y = 17$
 $2(4x - 2y = 8)$
 $8x - 4y = 16$
 $11x = 33$
 $x = 3$
 $3(3) + 4y = 17$
 $9 + 4y = 17$
 $4y = 17 - 9$
 $4y = 8$
 $y = 2$
 Sub 2
 Check
 $\text{Poi } (3, 2)$

Feb 27-8:09 AM

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 $3y - x - 8 = 0$
 $-x + 3y = 8$
 $4x + 3y = 24$
 $-x + 3y = 8$
 $5x = 16$
 $x = \frac{16}{5}$
 $3y = 24 - \frac{64}{5}$
 $3y = \frac{120}{5} - \frac{64}{5}$
 $3y = \frac{56}{5}$
 $y = \frac{56}{15}$
 $y = \frac{56}{15} \cdot \frac{1}{3}$
 $y = \frac{56}{45}$

ii) $3x + 4y = 17$
 $4x - 2y = 8$

Feb 27-8:09 AM

(1.6) Solving Linear Systems: Elimination (with fractions)

• How to SOLVE a system of equations algebraically - Simple Elimination

Example 1: Solve using elimination.

i) $8 \left(\frac{x+1}{2} + \frac{3(y-1)}{8} = 0 \right)$ ①
 $4(x+1) + 3(y-1) = 0$
 $4x + 4 + 3y - 3 = 0$
 $4x + 3y + 1 = 0$
 $4x + 3y = -1$ ①

ii) $3 \left(\frac{2x+3}{3} + 6y = -1 \right)$ ②
 $2x + 3 + 18y = -3$
 $2x + 18y = -6$ ②

Eliminate
 $4x + 3y = -1$ ①
 $2(2x + 18y = -6)$ ②
 $4x + 36y = -12$ ②
 $-33y = 11$
 $y = -\frac{1}{3}$
 $4x + 3(-\frac{1}{3}) = -1$
 $4x - 1 = -1$
 $4x = 0$
 $x = 0$
 $\text{Poi } (0, -\frac{1}{3})$

Feb 25-10:40 AM

(1.6) Solving Linear Systems: Elimination (with fractions)

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Eliminate
 $4x + 3y = -1$ ①
 $2(2x + 18y = -6)$ ②
 $4x + 36y = -12$ ②
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 $4x = 0$
 $x = 0$
 $\text{Poi } (0, -\frac{1}{3})$

Feb 25-10:40 AM

Example 2: Solve using elimination.

$$4x + 3y = 4$$

$$8x - 8y = -2$$

Homework

Page 54 # 11 b d f,
 Page 59 # 3 d g h

Feb 25-10:44 AM

Feb 21-8:35 AM

Chapter One Test Review Questions

p. 62 & 63

q. 1,2,4,5,7a) d) ,8, & 12 a) d), 13,
16

Chapter Self Test

p. 64

q. 1-5,7-9

Feb 27-11:13 AM